# UNITED STATES DISTRICT COURT DISTRICT OF MASSACHUSETTS

ATLANTIC RESEARCH MARKETING SYSTEMS, INC.,

Plaintiff,

V.

)

STEPHEN P. TROY, JR., AND TROY INDUSTRIES, INC.,

Defendants.

CIVIL ACTION NO. 07-11576-PBS

#### MEMORANDUM AND ORDER

May 14, 2010

Saris, U.S.D.J.

# I. INTRODUCTION

This patent infringement case involves handguards for guns such as M16s. Plaintiff Atlantic Research Marketing Systems, Inc. ("A.R.M.S.") holds U.S. Patent No. 6,499,245 ("the '245 Patent"), reissued as U.S. Patent No. RE39,465, entitled "Modular Sleeve Yoke" ("the '465 Patent"). Defendants and counterclaimants Stephen P. Troy, Jr. and Troy Industries, Inc. (collectively "Troy") hold U.S. Patent No. 7,216,451, entitled "Modular Hand Grip and Rail Assembly for Firearms" ("the '451 Patent").

A.R.M.S. filed a complaint against Troy, its former

 $<sup>^{\</sup>rm l}$  Or, as Vergil put it, "I sing of A.R.M.S. and the man, who came first from the shores of Troy . . ." Vergil, <u>Aeneid</u>, Bk. 1, ll. 1-2.

employee, claiming, among other things, that Troy's handguard rail systems infringe claims 31 to 36 of the '465 Patent. Troy has filed counterclaims against A.R.M.S. seeking a declaration that claims 31 to 36 of the '465 Patent are invalid.

A.R.M.S. also asserted counts alleging misappropriation of trade secrets, breach of fiduciary duty, violation of Mass. Gen. Laws ch. 93A, breach of contract, and conversion. After a two week trial, the Court allowed Troy's motion for judgment as a matter of law as to the breach of contract claim and, because A.R.M.S. failed to put forth any evidence of damages, to the conversion claim. The jury then found Troy liable for misappropriation of trade secrets and breach of fiduciary duty and entered a verdict in favor of A.R.M.S. for \$1,813,465. In a separate opinion, the Court has found Troy liable for violation of Mass. Gen. Laws ch. 93A and awarded A.R.M.S. reasonable attorneys' fees, expenses, and costs, including expert fees.

Following the Court's claim construction, A.R.M.S. and Troy have both filed motions for summary judgment on the patent issues. After extensive briefing and hearings, as well as having heard relevant evidence at trial, the Court ALLOWS Troy's motion for summary judgment of invalidity of claims 31-36 of A.R.M.S. '465 patent [Docket No. 213]. As such, the Court need not reach A.R.M.S.' motion for summary judgment of infringement of claims 31-36 of the patent [Docket No. 217].

# II. DISCUSSION<sup>2</sup>

# 1. Written Description

Issued patents are presumed valid under the Patent Act, 35 U.S.C. § 282. Thus the party challenging the validity of patent claims bears the burden of showing by clear and convincing evidence that the patent is invalid. See AK Steel Corp. v. Sollac & Ugine, 344 F.3d 1234, 1238-39 (Fed. Cir. 2003).

In deciding a case on summary judgment, the Court views the facts in the light most favorable to the non-moving party and makes all reasonable inferences in that party's favor. O'Connor v. Steeves, 994 F.2d 905, 907 (1st Cir. 1993). Summary judgment is appropriate when no genuine issue exists as to any material fact, and the moving party is entitled to judgment as a matter of law. Eli Lilly & Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). "When evaluating a motion for summary judgment, the court views the record evidence through the prism of the evidentiary standard of proof that would pertain at a trial on the merits." Id. "Thus, a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of invalidity so that no reasonable jury could find otherwise." Id.

The first paragraph of 35 U.S.C. § 112 provides:

<sup>&</sup>lt;sup>2</sup> The Court assumes familiarity with the factual background set forth in its Claims Construction [Docket No. 109] and 93A memoranda.

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

# 35 U.S.C. § 112.

To satisfy the written description requirement, "the description must 'clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." Ariad Pharm., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (quoting <u>Vas-Cath, Inc. v. Mahurkar</u>, 935 F.2d 1555, 1562-63 (Fed. Cir. 1991)). That is, "the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." Id. (citing Vas-Cath, 953 F.2d at 1563). In this context, "possession" entails "possession as shown in the disclosure." Id. This "test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art." <a>Id.</a> "[T]he specification</a> must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed." Id. This inquiry is a question of fact. <a href="Id.">Id.</a>

The process of "determining whether a patent complies with the written description requirement will necessarily vary

depending on the context. Specifically, the level of detail required . . . varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." Id. (citing Capon v. Eshhar, 418 F.3d 1349, 1357-58 (Fed. Cir. 2005)). The

requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement. Conversely . . . actual "possession" or reduction to practice outside of the specification is not enough. Rather . . . it is the specification itself that must demonstrate possession. And while the description requirement does not demand any particular form of disclosure, or that the specification recite the claimed invention in haec verba, a description that merely renders the invention obvious does not satisfy the requirement.

<u>Id.</u> at 1352 (citations omitted) (emphasis added).

Claims 31-36 cannot satisfy the written description requirement. "[R]equiring a written description of the invention plays a vital role in curtailing claims that do not require undue experimentation to make and use, and thus satisfy enablement, but that have not been invented, and thus cannot be described." Id. Likewise, in this case, the written description requirement curtails claims that have been invented, but intentionally hidden. "Requiring a written description of the invention limits patent protection to those who actually perform the difficult work of 'invention' . . . and disclose the fruits of that effort to the public." Id. at 1353. A.R.M.S. and Richard Swan,

A.R.M.S.' owner and the patentee, chose not to do so. The idea behind the requirement of a written description is that "[e]very patent must describe an invention. It is part of the quid pro quo of a patent; one describes an invention, and, if the law's other requirements are met, one obtains a patent." Id. at 1345.

A.R.M.S. sought to have it both ways: first, to possess an invention exclusively without disclosure, and then, when others were starting to use the technology, to protect it with a patent.

The specification of the '465 Patent does not describe a handguard that can be supported solely by clamping to the barrel nut. Instead, it describes an invention that is supported by both the barrel nut and attachment to the upper receiver via a receiver sleeve. The specification states that "[t]he upper handguard piece 50 is then supported not only by the rear portion underside 40 to the receiver top 13, but also by the engagement of the upper handguard piece 50 with the special yoke 180." '465 Patent, col. 10, 11. 56-59. The "rear portion underside 40" is the bottom of the receiver sleeve. '465 Patent, col. 6, 11. 37-39. The specification thus describes a handguard featuring a two-point attachment, not one supported solely by clamping to the barrel nut.

Further, the specification suggests that attachment to the barrel nut is only secondary: "[t]he upper handguard piece 50 is then supported not only by the rear portion underside 40 to the

receiver top 13, <u>but also</u> by the engagement of the upper handguard piece 50 with the special yoke 180." '465 Patent, col. 10, 11. 56-59 (emphasis added). "Although the modular sleeve is self supported by the connection of the rear portion underside to the receiver top, <u>additional support</u> may be provided by the addition of a special yoke . . . The special yoke . . . . reinforces the modular sleeve . . . " '465 Patent, col. 2, 11. 30-36 (emphasis added).

Moreover, the yoke described was too narrow to independently support the handguard; the delta ring would have to be removed and a significantly wider yoke used to allow the handguard to be supported only by attaching to the barrel nut. (Trial Tr. vol. 3, Swan Test., 90, June 17, 2009 ("The other one was that you could attach to the barrel nut and still leave the delta ring there as long as you were going to use a sleeve system to help support it, because without full purchase on the complete barrel nut, you would not have enough strength. Removing the delta ring and being able to go to the full width of the barrel nut and captivate in front of it, it would provide enough strength.").) This despite the fact that the '465 Patent specifically indicates compatibility with a delta ring, and the yoke is described as being specifically designed to work with one:

As may be seen from both FIGS. 24 and 25, once the special yoke 180 engages the barrel nut 170, the delta ring 162, which is spring loaded and is held back with a screw driver or the like while the special yoke 180

is installed, is released and moves forward substantially covering the barrel nut 170 and a portion of the special yoke 180. The special yoke notch 191 provides access for a screw driver or other tool in manipulating the delta ring 162 and special yoke 180. On those firearms with the delta ring 162 removed, the special yoke 180 is positioned exactly the same way over the barrel nut 170.

'465 Patent, col. 10, 11. 5-14.

The specification repeatedly refers to "the invention" as featuring a receiver sleeve, which provides one of the handguard's two points of support. According to the specification, "[t]he present invention is anchored by the universal receiver sleeve." '465 Patent, col. 5, 11. 31-32.

Specifically, the present invention is a modular sleeve . . . . The modular sleeve is made up of a universal receiver sleeve . . . the underside of the rear portion of the universal receiver sleeve being fixedly attached to the firearm receiver top . . . said upper handguard piece top being joined to the underside of the forward portion of the receiver sleeve.

'465 Patent, col. 2, ll. 37-61; see also '465 Patent, col. 1, l. 67 - col. 2, l. 15; '465 Patent, col. 6, ll. 30-47; '465 Patent, Abstract. The specification repeatedly describes the invention as featuring a handguard attached to a receiver sleeve; it does not describe a handguard supported solely by the barrel nut.

The text of the specification describes every embodiment as having a receiver sleeve to which the upper handguard attaches, and every figure showing a complete view of the upper handguard shows the handguard either connected to or unitary with the receiver sleeve. Although A.R.M.S.' expert, John Nixon, pointed

to figures 6A-C as showing an upper handguard that did not require attachment to the receiver sleeve, the figures show otherwise. The embodiment depicted in Figures 6A and 6C is described thus: "the top of the 53 upper handguard 50 and receiver sleeve bottom section 40 may be integrated into one piece, thereby forming a resulting upper handguard piece top 53." '465 Patent, col. 6, 1l. 47-51. Element two of Figure 6B is noted to be a "universal receiver sleeve." '465 Patent, col. 5, 1l. 31-32. Nixon also pointed to Figure 14, but Figure 14 also features connection to the receiver sleeve. '465 Patent, col. 5, 1l. 36-38; '465 Patent, col. 8, 1l. 13-14.

A.R.M.S. contends that the use of the word "modular" to describe the system implies that the receiver sleeve is unnecessary. But calling the system "modular" only implies that the system is made of "separable component[s], frequently one[s] that [are] interchangeable with others, for assembly into units of differing size, complexity, or function." Webster's Collegiate Dictionary 871 (1992). But the fact that the parts are separable does not indicate that the rest of the device is fully functional when the part is removed. For instance, a car is modular, and its wheels are modules; but it is risky to try driving one without them.

The specification gives no indication that Swan had in fact invented a system that could be supported by attaching solely to

the barrel nut without attaching to the upper receiver via a receiver sleeve. There is simply nothing in the specification that would indicate to persons skilled in the art that, as of the filing date, Swan had invented what is claimed in claims 31-36.

This should come as no surprise to Swan and A.R.M.S., of course, because they were attempting to keep that very fact a secret. A.R.M.S. has asserted at trial, and succeeded in proving, that Swan's invention of a handguard that is supported only by clamping to the barrel nut and not also by attaching to the upper receiver via a receiver sleeve, the handquard claimed in claims 31-36, was a trade secret. A.R.M.S. argued and established at trial that its invention was a secret until the '465 Patent was issued, meaning that the '245 Patent (the specification of which is identical to the specification of the '465 Patent) did not reveal the invention. According to A.R.M.S.' own arguments, claims 31-36 reveal that Swan invented and possessed the technology, but the specification does not. A.R.M.S. sought damages from Troy's theft of its trade secret, the invention at the heart of claims 31-36, past the issuance of the '245 Patent but not "beyond the publication or the issuance of the '465 Patent, which was January 16, 2007. . . . So our trade secret stops when the '465 issues . . . . " (Trial Tr. vol. 2, 130-31, June 16, 2009.) Under A.R.M.S.' own theory, the '465 Patent cannot satisfy the written description requirement.

When asked at trial about how his trade secret could survive issuance of the '245 Patent, Swan replied that "[t]he trade secrets withheld in this item [the prototype] are not divulged in this patent." (Trial Tr. vol. 2, 112.) Swan said:

The other one was that you could attach to the barrel nut and still leave the delta ring there as long as you were going to use a sleeve system to help support it, because without full purchase on the complete barrel nut, you would not have enough strength. Removing the delta ring and being able to go to the full width of the barrel nut and captivate in front of it, it would provide enough strength. That was a trade secret. That was not shown in my '245 Patent. That was a general aspect on that, that I put in the '245. I wanted to protect that . . . .

(Trial Tr. vol. 3, 90.) The Court questioned Swan:

THE COURT: Well, which ones did he take - are you claiming he took?

THE WITNESS: He took the information of how to attach to the barrel nut and only to the barrel nut and have something strong. That's what he took. That was the main thing that he took, the attachment to the barrel nut only. It had never been done before with a free-float system with a clamp around the barrel nut.

THE COURT: So the '245 (Patent) is the sleeve plus the barrel nut, whereas you're saying that what was new about what you did was just the barrel nut; is that right?

THE WITNESS: Yes.

. . . .

THE COURT: Just so I understand, so that they'll get it - you'll have the patent and I'll explain the interplay between patent and trade secret law - but as I understand it the patent showed the sleeve plus the barrel nut? Is that what you're saying?

THE WITNESS: Yes.

. . . .

THE COURT: And the differences, you say, that what wasn't in the patent and what he stole was just doing the barrel nut without the sleeve?

THE WITNESS: Right. And the extra-wide clamp. This extra clamp - wide clamp. The one in the patent shows a very narrow clamp which would have allowed it to go on with the delta ring in place.

. . . .

THE COURT: So - excuse me - just to get to it again, one is just - the trade secret is clamping on the barrel nut and the size of the clamp. Is that what you're claiming?

THE WITNESS: There were aspects of it. The rationale of why I was doing clamping to the barrel nut.

THE COURT: I understand that. The clamping to the barrel nut and the size of the clamp. We just have to be very clear to the jury specifically. Is that what you're saying the trade secret is -

THE WITNESS: Yes.

THE COURT: - that he took?

THE WITNESS: Yes.

(Trial Tr. vol. 3, 90-95.)

As A.R.M.S. has made clear, Swan is a leading inventor in his field. And he was, in fact, the inventor of what is claimed in claims 31-36. But even he believed the specification was not such to reveal that he had possession of the invention as of the filing date. Swan and A.R.M.S. intended to hide from the world that Swan had invented a handguard that could be supported solely by clamping to the barrel nut, and that did not also need to

attach to the upper handguard via the upper receiver. They now want patent protection after the fact, seeking to get the quo without the quid. As such, there is clear and convincing undisputed evidence that "the disclosure of the application relied upon [does not] reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." Ariad, 598 F.3d at 1351 (citing Vas-Cath, 953 F.2d at 1563). As such, claims 31-36 are invalid for lack of written description. For this reason, the Court need not address the claims of lack of enablement or infringement.

# 2. Best Mode

The best mode requirement "requires an inventor to disclose the best mode contemplated by him, as of the time he executes the application, of carrying out the invention." In re Gay, 309 F.2d 769, 772 (C.C.P.A. 1962). The existence of a best mode is purely subjective, depending upon the inventor's actual belief at the time the application was filed. Bayer AG v. Schein Pharm., Inc., 301 F.3d 1306, 1314 (Fed. Cir. 2002). As such, it is a question of fact. Taltech Ltd. v. Esquel Apparel, Inc., 279 Fed. Appx. 974, 977 (Fed. Cir. 2008).

Finding invalidity on the basis of failure to satisfy the best mode requirement requires undisputed "clear and convincing evidence that the inventor both knew of and concealed a better mode of carrying out the claimed invention than that set forth in

the specification." Teleflex, Inc. v. Ficosa N. Am. Corp., 299
F.3d 1313, 1330 (Fed Cir. 2002). To determine whether the best
mode requirement is met, courts engage in a two-pronged analysis.

TALtech Ltd., 279 Fed. Appx. at 977. "First, the factfinder must
determine whether, at the time of filing the application, the
inventor possessed a best mode for practicing the invention."

Eli Lilly, 251 F.3d at 963. This "involves a subjective inquiry"
whereby the factfinder focuses "on the inventor's state of mind
at the time of filing." Id. "Second, if the inventor possessed
a best mode, the factfinder must determine whether the written
description disclosed the best mode such that one reasonably
skilled in the art could practice it." Id. This "involves an
objective inquiry focus[ed] on the scope of the claimed invention
and the level of skill in the art." Id.

Swan's best mode for practicing the invention was his design that allowed supporting the handguard solely by attachment to the barrel nut, without requiring additional support by attachment to the upper receiver via the receiver sleeve. Swan admitted at trial that he possessed this best mode and deliberately kept it secret. Swan testified that he possessed the design as of the February 1, 2002 filing date. (Trial Tr. vol. 2, 24-26.) He did not disclose the best mode, instead attempting to protect it as a trade secret. (See Trial Tr. vol. 3, 90 ("Removing the delta ring and being able to go to the full width of the barrel nut and

captivate in front of it, it would provide enough strength. That was a trade secret. That was not shown in my '245 Patent . . . . I wanted to protect the because - until I knew which way the government was going to go.").) As discussed above, the written description in the '465 Patent does not disclose the best mode such that one reasonably skilled in the art could practice it. As such, claims 31-36 fail to satisfy the best mode requirement. As the claims fail the written description and best mode requirements, they are invalid.<sup>3</sup>

#### ORDER

The Court **ALLOWS** Troy's motion for summary judgment of invalidity of claims 31-36 of A.R.M.S. '465 patent [Docket No. 213] and, as such, A.R.M.S.' motion for summary judgment of infringement of claims 31-36 of the patent [Docket No. 217] is moot.

**S/PATTI B. SARIS**United States District Judge

<sup>&</sup>lt;sup>3</sup> Although courts often start their analysis by addressing claims of infringement, there is no bar to independently addressing counterclaims of invalidity. See Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 99-103 (1993) (holding that even a finding of non-infringement does not make moot a counterclaim of invalidity).